

April 22, 2020



CTS INSPIRATIONS

CTS NEWS

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President's Message

COVID-19 Update:

On March 17, 2020, we began our first emergent CTS email informing our members that amid the confusion and unique challenges of COVID-19, we would lead the charge in being a light of guidance and responsible hope for our community and respiratory healthcare providers. Since then, CTS has created a [COVID-19 resource page](#), provided medical expertise for regional, state and national government agencies, as well as participated in the publication of recommended healthcare guidelines for COVID-19 (these documents can be found on our [COVID-19 resource page](#)). CTS, in partnership with the California Society of Respiratory Care (CSRC), also created a [COVID-19 dashboard](#) specifically for Californians.

Every day, our CTS officers have been diligently working with colleagues, locally and nationally, to provide you the most up-to-date information. Although information continues to change daily, we hope that by sharing our work, we can assist your teams and institutions in meeting the ever-growing demands of the COVID-19 epidemic.

Over a century ago, there was also another global respiratory epidemic. To this day, many lives are taken because of this respiratory illness and although we have made strides in treatment, it is still a devastating disease for some. It was because of this respiratory disease that the society was formed. If you are like me and in need of a brief respite from COVID-19, read further below on the rich histories of the American Thoracic Society, the California Thoracic Society and the fight against indifference.



"The biggest disease today is not leprosy or tuberculosis, but rather the feeling of being unwanted, uncared for, and deserted by everybody." – Mother Teresa

The American Thoracic Society (ATS) was established in 1905, in its early infancy it was known as the American Sanatorium Association (ASA). The initial program was developed during the tuberculosis epidemic (March 24 was World Tuberculosis Day) and served as an entity to advocate, treat and prevent tuberculosis. The success of ASA fostered other areas of respiratory interest that were beyond tuberculosis. This much larger and broader focus later led to the re-branding of the American Sanatorium Association to what we now know as the American Thoracic Society. The California Thoracic Society (CTS), as a chapter of ATS, also follows in pursuit of being an advocate for the forgotten, especially for those suffering from asthma, COPD, lung cancer, sepsis, acute respiratory distress, sleep apnea and now COVID-19 in addition to many other diseases.

The evil of indifference is real, especially for those stricken with COVID-19 and have no voice. California is the most populous U.S. state, with a little over 39.5 million residents¹ and the third largest by area across a total area of about 163,696 square miles (423,970 km²). Representing our state and being the voice for the voiceless is Lekshmi Santhosh (UCSF), Ni-Cheng Liang (Coastal Pulmonary Associates) and Jim Brown (UCSF). Drs. Santhosh and Liang are two extraordinary women who serve as CTS's representatives on the ATS Council of Chapter Representatives. Dr. Jim Brown is the Chair for CTS's Legislative and Public Policy/Advocacy and frequently represents our state on respiratory issues at Capitol Hill. We are grateful as a professional society to be able to advocate for our CTS members and the patients we serve. Examples of such advocacy include tighter legislation for clean air, standing up against vaping and higher taxes on cigarette companies. The fight against indifference is an ongoing battle, and we are proud to lead that charge. If you are willing or interested in helping CTS contact us by clicking on the following link <https://calthoracic.org/contact/>.

Count Down: [CTS Southern California Conference](#) is only 5 months away.

Pulmonary Fact(s):

March 24 – World Tuberculosis Day

A total of 1.5 million people died from TB in 2018 (including 251,000 people with HIV). World-wide, TB is one of the top 10 causes of death and the leading cause from a single infectious agent (above HIV/AIDS).²

An estimated 58 million lives were saved through TB diagnosis and treatment between 2000 and 2018.²

Ending the TB epidemic by 2030 is among the health targets of the Sustainable Development Goals.²

[ATS Tuberculosis patient information sheet](#)

If you are interested in helping CTS contact us by [clicking here](#).



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References:

1. <https://www.census.gov/quickfacts/CA>
2. <https://www.who.int/news-room/fact-sheets/detail/tuberculosis>

Editor's Note:

We never know how high we are
Till we are called to rise;
And then, if we are true to plan,
Our statures touch the skies—
—Emily Dickinson

noun**noun: equipoise**

1. balance of forces or interests.

So many of us are afraid of letting ourselves, colleagues, and patients down. We cannot read the future, yet we are accountable to it, second-guessing our decisions especially when treating a crashing patient. We hold ourselves responsible when things go badly, even if we made the wrong decision for the right reasons. Every complication hurts us; every life lost scars us. The principle of clinical equipoise is sacred in academic medicine, but sometimes difficult to implement in practice. When faced with a sick patient, our instinct is to *do something* as if choosing *not* to do something were not itself a form of action.

Ultimately, we must each follow our medical conscience, practicing in a way that enables us to be consistent with not just our training, but our morals. Hypertension is a known risk factor for disease severity in SARS CoV-2 infection. ACEIs and ARBs have been hypothesized to both benefit and harm the patient, based on the up-regulation of the ACE-2 receptors to which the virus binds. (1) The recommendation of the AHA, ISH and HFSA (and CTS) has been to continue these medications. But would an individual clinician be wrong to *discontinue* the drug, after discussion with their patient, especially if a reasonable alternative existed? Similarly, comparison of protocols amongst highly respected major academic institutions reveals varying recommendations for the use of hydroxychloroquine/azithromycin. CTS recommends not using these medications to prevent or treat COVID-10 in the outpatient setting and yet, how many of us would justify prescribing the medications in an outpatient setting, especially if faced with a demanding patient and/or family?

Reference:

1. [ACE Inhibitors and ARBs During the COVID-19 Pandemic](#)

California COVID-19 Timeline

JAN 31 2020	3 cases COVID-19 confirmed in CA, 1 each in LA, Orange and Santa Clara counties. All were people who had returned from Wuhan, China.
FEB 2 2020	6 cases confirmed
FEB 26 2020	9 cases confirmed, now involving Humboldt and Sacramento counties, 1st known case of community transmission identified in Solano County
FEB 29 2020	13 cases
MAR 2 2020	23 cases
MAR 5 2020	54 cases (1st confirmed COVID-19 death in CA on March 4, hot spots in Santa Clara 20, LA 11)
MAR 7 2020	San Diego's 1st case reported
MAR 8 2020	102 cases
MAR 12 2020	237 cases
MAR 15 2020	457 cases (Several Bay Area counties issue shelter-in-place orders on MAR 16)
MAR 19 2020	1019 cases (CA institutes statewide stay-at-home order)
MAR 27 2020	4900
APR 3 2020	12686
APR 10 2020	21381
APR 15 2020	27097
APR 21 2020	33897 cases (1229 deaths, 3.6%)

Clinical Updates*:

- 1) The list of COVID-19 associated symptoms continue to expand. *ENT symptoms including taste or smell disorders are frequently reported as is conjunctivitis (1) . There are also increasing reports of myocarditis, perhaps not surprising given the high levels of ACE-2 receptors in the heart (2).*
- 2) Nearly all studies reporting on clinical presentation of COVID-19 have focused on patients with at least moderate disease who are being admitted to the hospital. A paper published in last week's Mayo Clinic Proceedings looks at an ambulatory urban population. Although COVID-19 may present like any other viral illness, there are clues which help to distinguish it from other diseases. In particular, onset of dyspnea occurs several days after the initial onset of symptoms. Cough is dry. Temperature elevation may be mild. Exercise-associated dyspnea and oxygen desaturation are frequently seen.

- 3) The role of laboratory workup in the outpatient setting is not clear. However, there are negative prognosticators which may be helpful in determining disposition: Higher inflammatory markers including CRP, D-dimer, IL-6, ferritin and TNF-alpha are associated with severe disease and increased mortality, but these have not been verified in the outpatient setting.
- 4) Sensitivity of COVID-19 RT-PCR varies across platforms. Sensitivity is also affected by *viral load* (peaks soon after the onset of symptoms), *sample site* (lower respiratory > upper respiratory) and *sample quality* (see video). Hence, a patient with an initial negative swab but high-risk exposure or for (non-healthcare workers) higher risk for severe illness (severe obesity, uncontrolled diabetes, cardiovascular disease, hypertension, renal failure, immunocompromising condition, chronic lung disease, nursing home, age > 65 should be considered a false negative. Repeat testing should be done.

How to obtain nasopharyngeal swab specimen

- 5) Co-infection rates with other viruses and bacteria range as high as 14-20%.
- 6) Routine Chest x-rays and Chest CTs are still not recommended as part of routine diagnostic workup, in patients with mild disease AND without risk factors for progression.

References:

1. [Ocular manifestations of a hospitalised patient with confirmed 2019 novel coronavirus disease](#)
2. [Cardiac Involvement in a Patient with COVID-19](#)

Perspective:

Undergoing an appendectomy during a pandemic

Originally published [KevinMD.com](https://www.kevinmd.com/blog/2020/04/undergoing-appendectomy-during-pandemic.html) on April 5 2020

The world is paused. But is it? Just because the world is experiencing a pandemic does not mean that the rest of the world's ailments all of a sudden go away. Their priority may fall in ranking, but they persist. Health and disease continue.

I ate lunch and had severe abdominal pain shortly thereafter. Perhaps a bout of bad acid reflux, I thought, but the pain persisted into dinner, and when I was unable to lay down to get comfortable or to fall asleep, I knew something was amiss. I wanted to give the heating pad another hour to help, but my husband, a non-physician, insisted. We drove up to the ED because I was uncertain I would be able to walk the distance from the parking lot to the entrance. We were met with masked faces warmly asking what we needed. I was dropped off, and in an outdoor makeshift triage station that was empty except for the two masked nurses outside, a few tables, and portable patient dividers, I was asked the usual series of triage questions which granted me passage to the indoor waiting room of the ED.

It was midnight Friday night, and I was the lone occupant of the waiting room. I was whisked back, and before I knew it, CT scan was done, ED physician informing me I had acute appendicitis. Sleeping and brief periods of consciousness alternated as I waited for surgery. Being rolled in my hospital bed to the OR, the hallways were empty. The usual cacophony of the asynchrony of dings from the patient call lights was absent. Every bump that my bed rolled over was amplified in

the silence and felt like a painful jostle of my abdomen. I remember scooching over to the OR table and waking up in the PACU, still under the effects of anesthesia, making the nursing staff laugh with my uninhibited jokes. Back to my room I went. A few hours later, grateful that my anesthesiologist paid heed to my history of severe post-op nausea and vomiting, I was able to eat a regular diet. Three small incisions but feeling like I had done 1,000 sit-ups with no six-pack to show for it.

First urination after surgery, hallelujah! First flatus passed after surgery, hallelujah! And for those few hours post-op, I had forgotten we were in the middle of a pandemic. I consider myself lucky to have had appendicitis during the seemingly prepared lull before a seemingly more and more imminent storm.

What of the seemingly imminent storm that rumbles while other ailments continue?

Waiting for the other shoe to drop. A sense of foreboding. Seeing the experience of the rest of the world, of our colleagues in New York, Washington, Louisiana: Could their experiences be ominously predicting our own fate, or maybe not? No one knows. The only certainty in life is that it's uncertain. And while the world is on pause, diseases still occur, and health care professionals, while in the middle of the storm, or readying for it, will still continue to care for all of the other human conditions. This is a certainty, an absolute.

We, however, are expert catastrophizers. Trained to do so on behalf of our patients. This honed skill, perhaps more important than ever, to save humanity. But what of us? The catastrophizers bearing the burden of the world's suffering are at the highest risk for crumbling, for breaking, under the weight. Already in a fragile state from burnout, the pandemic weighs heavy on our souls as health care professionals. Pre-traumatic experiences, post-traumatic experiences, the moral injury, the death, and human suffering that has and will come from all of this.

Could COVID-19 be an opportunity that brings the plight of health care professionals finally to the forefront? Protect us so we can protect you. Do your part and stay home. Flatten the curve to give health care professionals a chance. Donate PPE. Donate food. And yet through this war, we, health care professionals, along with the entirety of humanity, are united against a common, invisible enemy. We are all human; we all seek to be healthy and happy, all deserving of love and connection. Are we able to remind ourselves that health care professionals have never been so united before? That humanity has never been so united? Can all the health care professionals, no, all of humanity bear the weight of the world together? We can; we must. For our sake. For humanity's sake.

[Ni-Cheng Liang](#) is a pulmonary physician and founder, the [Mindful Healthcare Collective](#).

Worth Reading:**Free Access**

[COVID-19 Lung Injury is Not High Altitude Pulmonary Edema](#)

[Pharmacologic Treatments for Coronavirus Disease 2019 \(COVID-19\)](#)

A Review

<https://curriculum.covidstudentresponse.org/module-4-communicating-information-about-covid-19>

[Age, Complexity, and Crisis — A Prescription for Progress in Pandemic](#)

We can harness the expertise and person-power of the many clinicians and clinician-researchers who can't currently do their usual work to develop crisis-related protocols for ambulatory, institutionalized, homebound, and hospitalized patients, with special attention to elders and other populations with predictably high health care needs. Such protocols will allow optimal triage and care of patients with and without Covid-19, thereby reducing pressure on crisis-focused clinicians and the health system

[Treatment for severe acute respiratory distress syndrome from COVID-19](#)

Resources:**General:**

1. [CTS COVID Dashboard](#)
2. [UCSF HEALTH ATLAS](#)
3. [NIH COVID-19 Treatment Guidelines](#)
4. <https://covid.idea.medicine.uw.edu>
5. [UCSF COVID-19 Global Clinical Knowledge Base](#)
6. [Triage of scarce critical care resources in COVID-19: an implementation guide for regional allocation](#) *An expert panel report of the Task Force for Mass Critical Care and the American College of Chest Physicians*
7. [COVID-19 and Rehabilitation](#)
Expert-based opinion on early and short-term rehabilitative interventions in COVID-19 survivors after the acute hospital setting. The text consists of several parts: What do we know; What don't we know; and preliminary expert-based clinical recommendations, based on current knowledge.
8. [The Role of Chest Imaging in Patient Management during the COVID-19 Pandemic](#)

Treatment/Management:

9. [Infectious Diseases Society of America Guidelines on the Treatment and Management of Patients with COVID-19](#)
10. [COVID-19: Interim Guidance on Management Pending Empirical Evidence. From an American Thoracic Society-led International Task Force](#)
11. [YNHHS Initial Treatment Algorithm for Hospitalized ADULTS with Non-Severe* COVID-19](#)
— Yale is using hydroxychloroquine as 1st line therapy for hospitalized patients with O2 sats < or = 93%. UCSF is neutral. UCSD does not recommend any specific SARS CoV-2 specific therapies outside of a clinical trial.
12. [What is Post ICU Syndrome?](#)

Miscellaneous:

13. [Pulmonary Function Laboratories: Advice Regarding COVID-19](#)
14. [AARC Guidance Document](#)
15. [Communicating Information about COVID-19](#)

COVID-19 Clinical Trials in California

INSTITUTION	TITLE	POPULATION	CONTACT
UC Davis	Testing the Safety and Effectiveness of Experimental Sarilumab in Hospitalized Patients With COVID-19 (Coronavirus)		https://studypages.com/uc-davis/studies/?topic=coronavirus-covid-19
	Experimental Treatment with Remdesivir for Patients Hospitalized With Coronavirus Infection (COVID-19)		
	Coronavirus' (COVID-19) Impact on Low-Income Mexican-American Families		
UCLA	Prevention & Early Treatment of Acute Lung Injury (PETAL) Outcomes Related to COVID-19 Treated with HCQ among In-patients with Symptomatic Disease (ORCHID)		
	tocilizumab		
	Testing the Safety and Effectiveness of Experimental Sarilumab in Hospitalized Patients With COVID-19 (Coronavirus)		

INSTITUTION	TITLE	POPULATION	CONTACT
UCSD	Outpatient: Haz (Hydroxychloroquine/Azithromycin) anticipates opening on May 1 at UCSD	Outpatient >or = 18 years of age lab-confirmed active SARS-CoV-2 infection with at least one symptom (fever, cough or shortness of breath). Enrollment within 96hours of positive CoV-2 test	
	Remdesivir	Hospitalized	
	(COVACTA)Tocilizumab	Hospitalized	
	(RAMIC) low dose Ramipril	Patients presenting to the ED or who are hospitalized	https://fattyLiver.ucsd.edu
	Use of human coronavirus convalescent (immune) plasma to <i>stem</i> coronavirus	Age >or= 18 years of age. High-risk exposure to person with COVID-19 as defined by CDC within 96 hours of enrollment	
	Use of human coronavirus convalescent (immune) plasma to <i>limit</i> coronavirus associated complications		
UCSF	Remdesivir vs control, 2nd intervention TBD (NIH)	Hospitalized	Sarah Doernberg, Vivek Jain, Lisa Winston, Annie Luetkemeyer
UCSF Committee on Interventional Studies for COVID-19 Treatment and Prevention	Remdesivir Expanded Access Program (EAP)	Intubated, no pressor	Peter Chin-Hong

INSTITUTION	TITLE	POPULATION	CONTACT
Co-Chairs annie.luetkemery@ucsf.edu & michael.Matthay@ucsf.edu	Mesenchymal Stromal Cells	Intubated, ARDS	Carolyn Hendrickson, Michael Matthay
	3 RCTs of HCQ +/- AZI (ACTG, NHLBI, Duke/VA)	Hospitalized (opening soon)	Michael Matthay, Annie Luetkemeyer, Phyllis Tien
	Convalescent Plasma EAP & several RCTs	Hospitalized & ED	Ashok Nambiar, Jonathan Ebensten, Hendrickson/Hsue/Leutkemeyer
	Canakinumab RCT	Hospitalized, elevated ferritin & CRP (opening soon)	Priscilla Hsue, Annie Luetkemeyer
	Colchicine (Montreal Heart)	Outpatient	Priscilla Hsue
	HCQ/AZI vs control (Montreal Heart)	Outpatient	Annie Luetkemeyer
USC			
	Monitoring COVID-19 Related Health Impacts via the USC Understanding America Survey		https://sites.google.com/view/scctsicovide/home-page
	DAS181 for COVID-19: A multicenter, randomized, placebo-controlled, double-blind study		
	MESENCHYMAL STEM CELLS FOR THE TREATMENT OF MODERATE TO SEVERE COVID-19 ACUTE RESPIRATORY DISTRESS		

INSTITUTION	TITLE	POPULATION	CONTACT
Cedars-Sinai	NIH funded multicenter placebo controlled randomized double blind trial of Remdesivir for COVID-19		
	Phase II trial to evaluate Clazakizumab (Anti IL-6 monoclonal) in COVID-19 to treat cytokine storm		
	Convalescent serum as a treatment for COVID-19		
	Cardiac derived stem cell infusion study in Covid-19 positive patients		
	Clinical trials for patients in the ICU		
	BCG vaccination to protect healthcare workers from acquiring COVID-19		
INSTITUTION	TITLE	POPULATION	LINK
UC Davis	Testing the Safety and Effectiveness of Experimental Sarilumab in Hospitalized Patients With COVID-19 (Coronavirus)		https://studypages.com/uc-davis/studies/?topic=coronavirus-covid-19
	Experimental Treatment with Remdesivir for Patients Hospitalized With Coronavirus Infection (COVID-19)		

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